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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,839	07/16/2003	Ramanujan K. Valmiki	50689/JEJ/B600	6514
23363	7590	08/24/2005	EXAMINER	
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ART UNIT		PAPER NUMBER		
		2676		

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/623,839	VALMIKI ET AL.
	Examiner	Art Unit
	Sajous Wesner	2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 11/13/03 & 7/13/04.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 18-20 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-6,8-13 and 15-17 is/are rejected.
- 7) Claim(s) 7 and 14 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 16 July 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Remark**

This communication is responsive to the preliminary amendments filed on 11/13/03 and 7/13/04. Claims 1-20 are presented for examination.

### ***Election/Restrictions***

1. During a telephone conversation with Jun-Young E. Jeon on 8/22/05 a provisional election was made without traverse to prosecute the invention of group I, claims 1-17. Applicant in replying to this Office action must make affirmation of this election. Claims 18-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Specification***

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Information Disclosure Statement***

3. The examiner has considered the information disclosure statement (IDS) filed on 1/25/05, 7/18/05, 6/7/04, 6/21/04, 8/9/04, 12/14/04 and 7/13/04. Signed copies of the PTO-1449 form are attached.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 4, 8, 12, 15, 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Watanabe et al. (US 20030133441).

Considering claim 1, Watanabe discloses a method of decoding MPEG data comprising a plurality of macroblocks, each macroblock comprising a header and block layer data (see ¶s 15, 87), the method comprises decoding (601, fig. 16) the header of at least one macroblock using first processing element; and decoding (602, fig. 16) the block layer data of said at least one macroblock using a second processing element. See ¶s 130, 160-161. See further ¶ 80 for the MPEG data.

Re claim 4, Watanabe discloses variable length decoding.

System claim 8 is analogous to the method of claim 1; it is, therefore similarly rejected.

As per claim 10, Watanabe, at fig. 2, discloses a system implemented in an integrated circuit. (Note that since fig. 2 in Watanabe comprises a series of

interconnected circuit elements that define a decoding apparatus, it encompasses an integrated circuit.)

As per claim 12, Watanabe discloses a decoding system (see fig. 8) comprising a switch (323) wherein the first processing element (e.g., items 321 & 323) decodes the header of said at least one macroblock (e.g., *the start position of the [bit stream with frame/slices see fig. 9]*) and the switch provides the block layer data of said at least one macroblock (e.g., *designation information for a slice of the bit stream*) to the second processing element (324) for decoding.

See ¶ 105.

Claim 15 is similarly rejected as claim 4.

As per claim 16, Watanabe discloses reading the MPEG data from memory (621, fig. 16) and providing the MPEG data to the first processing element (601, fig. 16). See ¶s 157 and 159.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-3, 5, 9, 11, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe.

Regarding claim 2, Watanabe discloses receiving (121, fig. 16) a plurality of rows the MPEG data, each row comprising the plurality of macroblocks. (Please note that since in Watanabe, a stream of data packet header is received (see ¶ 157) and is segmented into picture frames with slices having a plurality of picture regions referred to as macroblocks (see ¶s 178-180), Watanabe therefore encompass the reception of a plurality of rows. For in an image frame (see fig. 3A), each slice corresponds to a row of macroblocks (see ¶ 87).

It is noted that Watanabe is not specific as to the concurrent decoding of the header of a first macroblock on a first one of the plurality of rows while decoding the block layer data of a second macroblock on a second one of the plurality of rows.

However, it is noted that since Watanabe at fig. 20 depicts the parallel processing of picture (e.g., header data), and speech (e.g., block layer data) of a stream of data packet, which encompass a plurality of slices/macroblocks with headers and payloads [or block layer data] (see ¶ 87s and 180-181). The speech and video data are processed for synchronization and is provided for display (see fig. 29). And, Watanabe, at ¶s 1981-99, suggests that the header (or slice start code) and the video slices are processed in pairs. This being the case, it is the Examiner's broad interpretation that Watanabe encompasses and/or makes obvious the concurrent decoding of the header of a first macroblock on a first one of the plurality of rows with the decoding the block layer data of a second macroblock on a second one of the plurality of rows.

Thus, the ordinary skilled in the art, given the teachings of Watanabe, would have been motivated to modify Watanabe's features and architecture to include the concurrent decoding of the header of a first macroblock on a first one of the plurality of rows while decoding the block layer data of a second macroblock on a second one of the plurality of rows; in order to avoid lip synch error in the displayed image, and to accelerate the processing speed of the system.

Re claim 3, Watanabe discloses providing the block layer data of the first macroblock the second processing element after decoding the header of the first macroblock. See ¶s 130, and 205.

Re claim 5, Watanabe discloses receiving the plurality of rows of the MPEG data from memory (621, fig. 18). See ¶s 157 and 159.

Claims 9 and 13 (in combination) contain features that are analogous to the limitations recited in claim 2. As the limitations of claim 2 have been found obvious over the teachings of Watanabe, it is readily apparent that the applied prior art performs the underlying functions. As such, the limitations in combined claims 9 and 13 are rejected under the same rationale as claim 2. In addition, Watanabe discloses MPEG data organized into a plurality of rows, each comprising a plurality of macroblocks, (wherein each row corresponds to a slice). See ¶ 87s and 180-181).

Re claim 11, Watanabe discloses MPEG-2 video data (see ¶ 80) and each row (201, fig. 3A) comprises at least one SLICE comprising the macroblocks (203, fig. 3B. See ¶ 87).

As per claim 13, Watanabe discloses

8. Claims 6, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Bebler et al. (US 6229853).

As per claim 6, it is noted that although Watanabe the processing of digital data (see fig. 1), Watanabe fails specifically teach receiving HDTV video data.

Bebler teaches receiving HDTV video data. See fig. 1 and col. 2, lines 51-52.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the MPEG data system of Watanabe to include the reception of HDTV video data, in order to provide a high definition digital video signal for display.

Claim 17 is rejected under the same rationale as claim 6.

#### ***Allowable Subject Matter***

9. Claims 7 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, because the prior art of record fail to teach a method and system of decoding MPEG data comprises decoding the header of at least one other macroblock using a third processing element concurrently with decoding of the header said at least one macroblock using the first processing element; and decoding the block layer data said at least one other macroblock using a fourth processing element concurrently

with decoding of the block layer data of said at least one macroblock using the second processing element.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

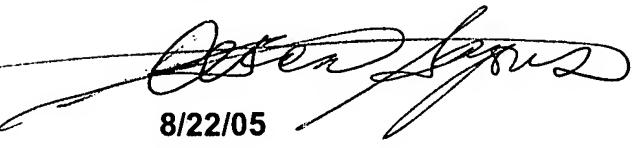
Hrusecky et al. (US 20030085903) discloses an MPEG-2 compression algorithm.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sajous Wesner whose telephone number is 571-272-7791. The examiner can normally be reached on Mondays thru Fridays between 10:30 and 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Wesner Sajous**



8/22/05